



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,747	01/26/2004	Cheng Kuo Tsung	MXIC-P910327	8731

7590 01/10/2006

Kenton R. Mullins
Stout, Uxa, Buyan & Mullins, LLP
4 Venture, Suite 300
Irvine, CA 92618

EXAMINER

KIM, PAUL L

ART UNIT PAPER NUMBER

2857

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,747

Applicant(s)

TSUNG ET AL.

Examiner

Paul Kim

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-23 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ridolfo in view of Peralá et al.

With regard to claims 1, 12, and 19, Ridolfo teaches a method of estimating a date for a tool comprising: obtaining a difference between a detected value of the parameter and a maintenance value of the parameter, determining whether the difference is less than or equal to a predefined value (col. 10, lines 46-51), performing a procedure if the difference is less than or equal to the predefined value (col. 10, lines 53-57), and estimating a date according to the difference and variation value if the difference is greater than the predefined value, the variation value representing a change in the parameter per time unit (col. 10, lines 57-63) and the maintenance date being stored to a maintenance schedule (fig. 6, parts 40 & 41 and col. 9, lines 38+). Ridolfo teaches the time to failure being estimated, but does not teach estimating the maintenance date. Peralá et al teaches a method of determining a maintenance date of a mechanism based on detected values (¶ 20). Since Ridolfo and Peralá et al are both within the art of preventative maintenance, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Ridolfo, so that a

Art Unit: 2857

maintenance date is determined, as taught by Perala et al, so as to derive the expected benefit of increased system flexibility by being able to determine the time to maintain as well as the time of breakdown.

With regard to claims 3 and 18, Ridolfo teaches the variation value being determined by a statistical method (col. 6, lines 15+).

With regard to claims 4-9 and 14-16, Ridolfo teaches automatically calculating the variation value from data corresponding to detected values of the parameter but does not teach the detected values being obtained over a period of time prior to estimating the maintenance date. Perala et al teaches detected values being obtained over a period of time prior to estimating the date (fig. 1, part 11). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Ridolfo, so that prior detected value data is used, as taught by Perala et al, so as to be able to improve accuracy of determining a maintenance date.

With regard to claims 10, 11, and 17, Ridolfo teaches the value being calculated from stored data and data inputted by a user (col. 4, lines 61-65).

With regard to claim 13, Ridolfo teaches the maintenance date being stored in a schedule (col. 11, lines 30-33).

With regard to claims 20 and 23, Ridolfo teaches a storage means comprising a variation value that represents a change of a parameter of the tool per time unit, a controller configured to estimate the date for the tool according to a variation value and a difference between a detected value of the parameter and value of the parameter (col. 10, lines 46-51), the maintenance date being stored to a maintenance schedule (fig. 6,

Art Unit: 2857

parts 40 & 41 and col. 9, lines 38+), and the controller being configured to provide a procedure to be performed on the tool when the difference is less than or equal to a predefined value (col. 10, lines 53-57). Ridolfo teaches the time to failure being estimated, but does not teach estimating the maintenance date or servicing recommendations. Perala et al teaches a method of determining a maintenance date of a mechanism based on detected values (§ 20) and providing a recommendation that maintenance be performed (fig. 1, part 7). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Ridolfo, so that a maintenance date and recommendation that maintenance be performed is determined, as taught by Perala et al, so as to derive the expected benefit of increased system flexibility by being able to determine the time to maintain and increased reliability by indicating what needs to be maintained.

With regard to claim 21, Ridolfo teaches a connection unit connected between the tool and apparatus (fig. 2, part 2).

With regard to claim 22, Ridolfo teaches an equipment information unit connected to the controller to store the maintenance information (fig. 2, part 4).

Response to Arguments

3. In the previous office action, the examiner objected to claim 2 as having allowable subject matter. However only a portion of claim 2 was amended with the independent claim, "the maintenance date is stored to a maintenance schedule". The

novelty of claim 2 was the phrase, "the maintenance date is estimated by adding a current date to the difference divided by the variety value".

Allowable Subject Matter

4. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including *all of the limitations of the base claim* and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2857

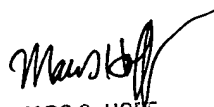
6: Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is 571-272-2217.

The examiner can normally be reached on Monday-Thursday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. 3

PK
December 7, 2005


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800